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Experiments and analysis of soft x-ray emission from laser-produced Nova plasmas using a grating spectrometer* - C. A. Back , O. L. Landen, R. E. Turner, J. A. Koch, and B. A. Hammel, *Lawrence Livermore National Laboratory, P.O. Box 808, L-473, Livermore CA 94551,* J. J. MacFarlane and D. Cohen, *University of Wisconsin, Fusion Technology Institute, Madison, Wisconsin 53706-1687,* and T. J. Nash, *Sandia National Laboratory, P. O. Box 5800, Albequerque, NM 87185* - Experiments on ICF-relevant plasmas have been performed using a soft x-ray incidence grating spectrometer . This spectrograph enables measurements with high spectral resolution at the peak of the blackbody temperature of typical hohlraum and gasbag targets used in inertial confinement fusion experiments. The bulk of the x-ray flux is emitted in this regime and the spectral features will be used to develop diagnostics of the hohlraum plasma conditions. We present results from experiments in which spectra from mid-Z dopants are recorded in the 10-40 Å regime on an x-ray streak camera.

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